CALIFORNIA ENERGY COMMISSION
Load Curtailment Systems
San Diego Regional Energy Office Project Summary

Project Description:

San Diego Gas and Electric Company recruited 43 customers representing 127 building sites to participate in the Peak Load Reduction Program. Participating customers included manufacturing facilities, Federal government facilities, warehouses, and agriculture and water pumping facilities. Customers installed communications links to enable buildings to reduce peak load between 10 and 30% within 15 minutes of receiving an emergency signal.

Project funds were used to:

- Recruit customers,
- Install Interval Data Recorder to record energy usage for these buildings, and
- Ensure communications equipment was linked up to the California Independent System Operator notification system and customer controls.

A pilot test of its system was conducted on May 13, 2001 from 2 p.m. to 6 p.m. The test verified a total 5,300 kilowatt reduction in peak load.

Funding Summary:

The award amount was $648,098. Participating customers also contributed roughly $150,000 in the form of in house engineering support. Roughly 55% of the project funds were used to install hardware, software, and communications equipment, 22% was used to develop marketing materials, recruiting customers and training them on different load strategies to use during a curtailment, and the balance of funds were used for network support and project reporting and analysis.

Project Results:

Over 65 customers ere recruited, with an estimated connected load of 40 megawatts to participants in the project. The pilot test demonstrated an actual load reduction of 5.3 megawatts, exceeding their contractual goal of achieving 3.125 megawatts of load reduction. This estimate was independently verified by Nexant using customer billing data. Overall cost to save peak load for this project was $122 per kilowatt.

Lessons Learned:

Pursuit of large customers yielded large load peak reductions and minimized the costs of marketing and recruitment. Customers were motivated to provide voluntary reductions during the summer of 2001 because of a fear of blackouts. These customers are unlikely to provide additional load reductions without some form of payment such as

the rate discounts provided to interruptible customers. A survey of the participants indicated that 22% of the peak load reduction was achieved by the use of lighting controls, 30% from HVAC controls and 47% by process controls.

Contact Information

SDREO	Kurt Kammerer, 858.244.1179
California Energy Commission	Michael Messenger, 916.654.4774